

# BOIS CAPITAL

## Telco Software Report - March 2015

### I. Bois Capital

Bois Capital is an investment bank focused on the technology sector. The Managing Partners have extensive experience in the Telco Software sector.



Peter Benedict previously served as Vice President and head of Alcatel-Lucent's Customer Experience Analytics business. He was responsible for strategy, product development, R&D and P&L for a suite of Big Data products that address the analytics needs of its fixed and wireless service providers across their marketing, engineering, operations, and care departments. Previously Peter was with Bell Labs.



Ben Boissevain has extensive corporate finance experience in the Telco sector, closing numerous wireless M&A transactions. He held positions at White & Case, Erste Bank in Vienna and Barclays Capital. Ben has spoken at wireless industry conferences and led the negotiations on a recent Telco Big Data analytics transaction described below.



Tarang Shah has extensive experience in technology. He was a Venture Capitalist at SoftBank Capital for mobile and software investments, SVP of Mobile, Payment, SaaS and Big Data Innovations at BofA, Lead Product Manager for Ericsson's 3G product line and Marketing Manager at Qualcomm. He is author of "Venture Capitalists At Work".

The Managing Partners are supported by Associates Sal Bakhrani, Nasier Emtiaz and Felipe Osario.



Bois Capital advised Swiss Mobility Solutions, a Swiss-based B2B provider of mobile device agent analytics solutions for assessing Customer Experience and Network Quality for Mobile Broadband services, in its sale in April 2014 to Gemalto (EPA:GTO), an international digital security company providing software applications with a market capitalization of €7.4 billion based in the Netherlands.

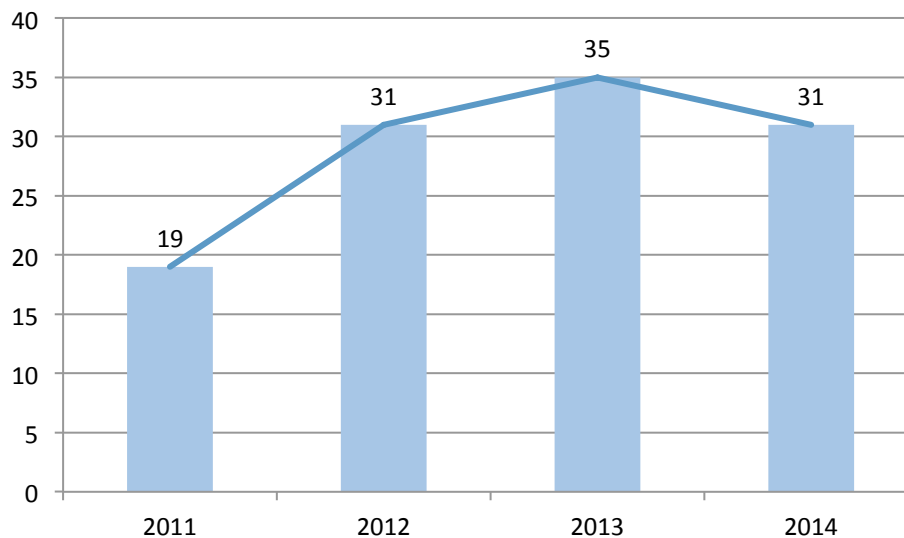
Bois Capital is currently representing a billion dollar US public company in the divestiture of its Telco analytics division. Bois Capital has also represented a sale of a private UK Telco analytics company in the CEM and service assurance space.

### II. Valuation Overview

*Telecommunication Software Industry has seen a transforming industry landscape over the past few years and we believe that the current innovative trends in the market will increase M&A activity in the coming years.*

M&A activity has picked up significantly during the past four years largely driven by the growth of mobile, the desire for speed and broadband connectivity, the migration to more software-defined architectures (SDN, NFV), the rise of customer experience as a major driver and KPI, and the evolution of SPIT-driven use cases that require solutions that span many different elements, leading to acquisitions and consolidation across products and companies.

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**Number of transactions in the past four years**

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*The mean revenue multiple, based on publically announced transactions, is 2.67x; the typical valuation range we're seeing is 2.50x-5.00x, depending on the size and strategic fit. Recently there have been a number of transactions whose multiples, while not publically reported, were 12x-15x due to strong strategic fit and demand.*

Telecommunications Software Industry has shifted to a growth in 'Average Revenue Per User (ARPU)' metric. This has increased the need for carriers to understand their customers better in order to offer services that can gain an additional share of their customers' wallet and increase retention/reduce churn to optimize CLV. This need has been a major driver of telecommunications software in the last five years, leading to a 'Sales CAGR' of 18% from 2011 to 2014.

As this trend continues to expand to the rest of the world (developed markets have 121 subscriptions per 100 inhabitants and emerging markets have 90 subscriptions per 100 inhabitants), we expect carriers to focus on ARPU growth, providing a significant tailwind to growth in telecommunications software sales. In fact, we're already seeing an increasing number of consolidations in the industry, especially in emerging markets, as companies boost their portfolios to include voice, data, wireless, and other telecommunication services.

### **III. Future of M&A within the Industry**

The increasing number of transactions will be driven by the following industry trends:

- Growing importance of ARPU as a source of top line growth will favor growth in the telecommunications software industry and attract additional investment money.

- The evolution of software-enabled systems enables deeper integration and leveraging of data across the eTOM stack, leading to a drive towards acquisitions of complimentary solutions.
- Future demand from emerging markets' carriers will require that players in the telecommunications software space have scale for necessary investments.
- Large players in the industry with financial flexibility driving a wave of strategic acquisitions of underperforming, yet attractive, players. Buying IPs will be a driving force.
- Growth of IoT and mobile payments will increase the need for technological advancements.
- The rise of cloud computing, mobile applications, social networking sites, and mobile commerce will continue to increase the need for industry security products. Players in the industry will constantly update their technologies to protect sensitive, personal information.
- Network Function Virtualization (NFV) and Software Defined Networking (SDN) will continue to evolve and bring functional efficiencies to data networks and support the migration to cloud.
- Increased interest of private equity firms within the Telecommunication Software space. The combination of an industry with significant growth and opportunities to improve operating margins is a very attractive space for private equity firms to execute roll-up strategies.

## IV. Significant Precedent Transactions

The following are significant precedent transactions in the Telco Software sector:

Date	Acquirer	Target	Target Summary	Enterprise Value <sup>(1)</sup>	Revenue (TTM) <sup>(2)</sup>	EV / Target Revenue
2/11/2015	j2 Global, Inc. (NasdaqGS:JCOM)	Firstway Digital Limited	Provides hosted communication services in Europe.	N/A	N/A	N/A
2/11/2015	Datadog, Inc.	Mortar Data Inc.	Mortar Data provides cloud based service for analyzing huge data sets	N/A	N/A	N/A
2/10/2015	Hitachi Data Systems Corporation	Pentaho Corporation	Provides Data Integration and business analytics platform	N/A	N/A	N/A
1/22/2015	Harman International Industries, Incorporated (NYSE:HAR)	Symphony Teleca Corp.	Symphony Teleca creates and commercializes SaaS/cloud software, mobile products and solution, and big data analytics	\$780.00	\$370.00	2.11x
1/28/2015	Ubiquity, Inc. (OTCBB:UBIQ)	Coversant, Inc.	Offers collaboration software. It offers Soapbox communicator and Soapbox server	\$5.76	N/A	N/A
1/8/2015	Dun & Bradstreet Corp. (NYSE:DNB)	Dun & Bradstreet NetProspex	Provides cloud-based data management solutions	\$125.00	N/A	N/A
10/13/2014	NetScout Systems (NasdaqGS:NTCT)	Tektronix Communication	Provides assurance, intelligence, and test solutions for a variety of communication applications.	N/A	N/A	N/A
10/3/2014	Enghouse Systems Limited	Voxtron nv	Voxtron nv develops multimedia solutions for internal customer service departments, outsourced contact centers, and customer interaction companies worldwide	\$8.35	NA	NA
9/26/2014	Altruist Technologies Pvt Ltd	Connectiva Analytics and Insights Ltd	Provides solutions that lower churn, improve operations, and boost ARPU for telecom, media and utility providers.	N/A	N/A	N/A
9/15/2014	Brocade Communications Systems (NasdaqGS:BRCD)	Vistapointe	Provides platform that allows mobile operators to monitor mobile network traffic.	N/A	N/A	N/A
9/15/2014	Spirent Communications (NasdaqGS:SPMY)	Mobilethink A/S	Offers analytic solution for telecom operators that analyzes mobile device usage, device trends, and marketing campaigns to increase top-line.	\$20.00	\$8.20	2.44x

8/27/2014	SolarWinds, Inc.	Solar Density Limited		NA	NA	NA
8/14/2014	Empirix Inc.	Verios Software & Systems	Offers real-time analytics, troubleshooting, management, and monitoring solutions to wireless operators.	N/A	N/A	N/A
8/5/2014	Comverse, Inc	Solaiemes, S.L.	Solaiemes, S.L. provides infrastructure solutions for carriers, MVNOs, and service providers	NA	NA	NA
8/4/2014	Enghouse Systems Limited	Jinny Software Ltd	Jinny Software Ltd. provides mobile messaging and advertising, call completion, and voice and value added solutions	\$17.71	\$23.27	0.8x
7/28/2014	Undisclosed	AmanziTel AB	manziTel AB develops and deploys open source network performance management and optimization solutions for the telecommunication industry.	\$2.10	NA	NA
7/18/2014	ENABIL Solutions Ltd.	Tarshan LLC	Tarshan LLC provides software consulting services for the telecom BSS/OSS market	NA	NA	NA
7/9/2014	Cisco Systems, Inc.	Tail-f Systems AB	Tail-f Systems AB provides configuration management software for networking equipment and network management systems.	\$175.00	NA	NA
7/4/2014	Enghouse Systems Limited	Basset AB	Basset AB offers wholesale revenue management systems for telecommunications and utility industries worldwide	\$9.40	NA	NA
7/1/2014	NetBoss Technologies, Inc.	Ventraq, Inc.	Provides personalized data integration and business analytic solutions for communication providers.	N/A	N/A	N/A
6/19/2014	EXFO, Inc. (NasdaqGS:EXFO)	Aito Technologies (Assets)	Develops customer experience analytic software for mobile network operators.	N/A	N/A	N/A
6/18/2014	SolarWinds, Inc.	Pingdom AB	Pingdom AB provides Website monitoring and performance management solutions to companies. It offers tools and services for Website owners in Sweden and internationally	NA	NA	NA
6/3/2014	MYCOM	OSI, Inc.	Provides umbrella fault and service impact management for network carriers.	N/A	N/A	N/A
5/15/2014	Cognizant Technology Solutions Corporation	itaas Inc.	itaas Inc., a custom software services company, specializes in developing, integrating, and testing digital video and application delivery across various platforms.	NA	NA	NA
4/29/2014	Zettics, Inc.	Velocent Systems	Customer experience management using real-time data analytics for mobile operators.	N/A	N/A	N/A
3/31/2014	Amdocs Limited	Utiba Mobility, Inc	Utiba Mobility, Inc. provides integrated mobile financial services software solutions.	NA	NA	NA
3/28/2014	Gemalto (Paris:GTO.PA)	Swiss Mobility Solutions	Provides solutions that analyse the quality on mobile broadband, including quality of experience and service.	N/A	N/A	N/A
3/3/2014	Enghouse Systems Limited	IT Sonix AG	IT Sonix AG operates as a software company that specializes in the development and sale of on demand telecommunications solutions, and customized intuitive software	\$9.62	NA	NA
2/28/2014	Ericsson	Azuki Systems, Inc.	Azuki Systems, Inc. develops and provides over-the-top (OTT) optimized multi-screen video technology solutions for mobile network operators, multi-service operators, content	NA	NA	NA
2/20/2014	Astellia SA (DB:4AS)	Ingenia Telecom, S.L.	Provides network analysis and optimization solutions for mobile operators.	N/A	N/A	N/A

2/18/2014	Spirent Communications Plc. (LSE:SPT)	DAX Technologies Corp.	Customer experience management system for communications companies.	\$37.00	N/A	N/A
2/14/2014	TiVo Inc.	Digitalsmiths Corporation	Digitalsmiths Corporation provides a cloud-based content discovery and recommendation service for service providers, content providers, and consumer electronics manufacturers	\$135.00	NA	NA
2/5/2014	Flash Networks, Inc.	Mobixell Networks Inc	Mobixell Networks Inc. provides intelligent mobile Internet solutions that optimize operator's data network and maximize data profitability	NA	NA	NA
1/27/2014	Keynote SIGOS	Meucci Solutions NV	Provides mobile fraud detection and end-to-end quality of service monitoring.	N/A	N/A	N/A
1/15/2014	CITIC Capital China Partners II, L.P. ; CITIC Capital Partners	AsiaInfo-Linkage, Inc.	AsiaInfo-Linkage, Inc. provides telecommunications software solutions, and information technology products and services to telecommunications carriers and operators.	\$547.08	\$607.87	0.90x
1/7/2014	Juniper Networks, Inc.	WANDL, Inc	WANDL, Inc. provides software solutions for network planning, management, design, and optimization	\$28.70	NA	NA
1/6/2014	Verint Systems (NasdaqGS:VRNT)	KANA Software, Inc.	Develops software solutions for service experience management.	\$514.20	\$140.00	3.67x
12/10/2013	Huawei Technologies (Australia) Pty Ltd	Fastwire Pty Limited	Fastwire Pty Limited provides operational support systems (OSS) and next generation network technology solutions for the service provider and enterprise markets	\$19.03	NA	NA
12/9/2013	Calero Software, LLC	PAETEC Software Corp	PAETEC Software Corp. provides service lifecycle management (SLM) solutions to streamline the support and delivery of telecom and IT services	NA	NA	NA
12/6/2013	Marlin Equity Partners	Coriant GmbH	Coriant GmbH manufactures multi-layer transport networking solutions	NA	NA	NA
12/5/2013	Calero Software, LLC	Movero Inc.	Movero Inc. provides enterprise managed mobility solutions. It engages in building strategic solutions by combining technology, service desk and consulting services to address	NA	NA	NA
12/3/2013	CSG Systems International Inc.	VoluBill S.A	VoluBill S.A. provides policy management, policy enforcement, and charging solutions to mobile, satellite, and fixed broadband operators.	\$3.00	NA	NA
11/5/2013	Amdocs Limited (NYSE:DOX)	Celcite Management Solutions, LLC	Provides self-organizing / self optimizing network (SON) and network management solutions to telco operators.	\$129.00	\$23.00	5.61x
11/1/2013	Enghouse Systems Limited	Information Access Technology, Inc	Information Access Technology, Inc., a call center technology developer, auto dialing and other communication products for the collection industry	\$2.69	NA	NA
10/29/2013	Ixia (NasdaqGS:XXIA)	Net Optics, Inc.	Delivers real-time network intelligence in network monitoring and security.	\$190.00	\$49.00	3.88x
10/23/2013	Infovista (EPA:IFV)	Aexio Software	Provides network optimization software solutions, especially among mobile operators.	N/A	N/A	N/A
10/17/2013	Farol Asset Management, LP ; Vicente Capital Partners ; Vicente Capital	iBwave Solutions, Inc.	iBwave Solutions, Inc. develops in-building wireless solutions for telecommunication firms, system integrators, and OEMs worldwide	NA	NA	NA
10/7/2013	Enghouse Systems Limited	ANDTEK GmbH	ANDTEK GmbH develops and sells communications software for enterprises.	NA	NA	NA
10/1/2013	IBM (NYSE:IBM)	The Now Factory Ltd	The Now Factory Ltd designs and develops IP intelligence solutions.	N/A	N/A	N/A

9/6/2013	Ericsson Inc.	Airvana LLC, EVDO business	EVDO business of Airvana LLC develops EVDO software that enables data transmission in a CDMA wireless network	NA	NA	NA
9/5/2013	Ericsson	Microsoft Corporation, Mediaroom IPTV Business	Microsoft Corporation, Mediaroom IPTV Business comprises Internet protocol television business of Microsoft Corporation which designs software used by phone companies to	NA	NA	NA
9/3/2013	Amdocs Limited (NYSE:DOX)	Actix, Ltd.	Offers mobile network analytics and optimization solutions.	\$120.00	\$52.00	2.31x
9/2/2013	Accenture Holdings B.V.	Grameenphone IT Ltd	Grameenphone IT Ltd. offers information technology (IT) products and services to businesses in Bangladesh.	\$18.43	NA	NA
7/16/2013	Evenex	HighJump Software Inc	Syniverse Technologies S.a.r.l. provides cloud-based managed communications services for monetizing mobile data, simplifying interoperability between networks, optimizing	NA	NA	NA
7/15/2013	Hubspoke Holdings, Inc	Calero Software, LLC	Calero Software, LLC provides Communications Lifecycle Management software and related solutions to enterprises in the United States and internationally	\$11.65	\$15.56	0.70x
7/9/2013	Sigma Systems Canada	Tribold Limited	Tribold Limited offers enterprise product management software for communication service providers	NA	NA	NA
7/5/2013	Genesys Telecommunications (NasdaqGS:GCTI)	SoundBite Communications, Inc.	Provides cloud-based mobile proactive customer care, and collections/payments solutions.	\$82.60	\$48.10	1.72x
6/6/2013	Guavus	Applied Broadband (Pipeline IPDR Collection Assets)	Offers mobile operators data analytics about bandwidth consumption and network activity.	N/A	N/A	N/A
6/6/2013	Guavus, Inc.	Pipeline IPDR Collection & Mediation Technology of Applied Broadband, Inc.	Pipeline IPDR Collection & Mediation Technology of Applied Broadband, Inc. comprises Pipeline, which operates in the cable industry for collecting, analyzing, and mediating	NA	NA	NA
5/15/2013	The SI Organization, Inc.	Applied Communication Sciences	Applied Communication Sciences provides communications research, consulting, and engineering services in the areas of cyber security, wireless and mobile applications.	NA	NA	NA
5/13/2013	Redknee Solutions Inc.	Nokia Solutions and Networks Oy	Nokia Solutions and Networks Oy develops and delivers mobile broadband network solutions. It offers customer experience management solutions that give operators a view of their	\$52.28	NA	NA
4/25/2013	Intel Corporation	Aepona Limited	Aepona Limited operates a software platform that bridges enterprises with network enabling service providers to offer communications, context, commerce, and control features that	NA	NA	NA
4/1/2013	Elephant Talk Communications Corp.	Telnicity, LLC	Telnicity, LLC provides ASP-based billing systems that enable communications resellers to sell multiple telecom services.	\$0.99	NA	NA
3/24/2013	Apple Inc	Wifislam, Inc	Wifislam, Inc. develops location-based applications with microlocation ability. It offers Positioning SDK that makes accurate indoor positioning easy to enable for developers; and	\$20.00	NA	NA
3/15/2013	Opera Software ASA	Skyfire Labs, Inc	Skyfire Labs, Inc. provides cloud-based solutions to solve network congestion problems for operators and their consumers around the world	\$147.00	\$4.09	35.90x
3/8/2013	Fairford Group	CTI Group Holdings Inc	CTI Group (Holdings) Inc., together with its subsidiaries, designs, develops, markets, and supports billing and data management software and services solutions, and carrier class voice	\$11.02	\$15.74	0.70x
3/8/2013	JDS Uniphase (NasdaqGS:JDSU)	Arieso Ltd.	Provides automatic network optimization solutions.	\$85.00	\$27.00	3.15x
2/28/2013	Apple Inc	AlgoTrim AB	AlgoTrim AB develops solutions for mobile devices in the fields of data compression, mobile imaging and video, and computer graphics	NA	NA	NA

2/4/2013	The Gores Group LLC	HBC Solutions, Inc.	HBC Solutions, Inc., doing business as Harris Broadcast, develops audio and video systems and tools for broadcasters, cable networks, MSOs, and mobile and IPTV providers	\$225.00	NA	NA
2/4/2013	Verint Systems Inc	Comverse Technology Inc.	Comverse Technology, Inc., through its subsidiaries, provides software-based products, systems, and related services for wireless, wireline, and cable network communication	\$1,471.94	\$1,635.49	0.90x
1/23/2013	Guavus	Neuralitic Systems	Provides solutions that increase revenue by improving churn and subscriber acquisition.	N/A	N/A	N/A
1/14/2013	Cisco Systems, Inc.	BroadHop, Inc.	BroadHop, Inc. provides policy control platforms for telecom operators worldwide	NA	NA	NA
Outliers - in yellow above and excluded from the calculations below.						
Number of Samples						13
Low						0.70x
High						35.90x
Mean						2.67x

## V. M&A Market and Process

There are many adjacent sectors that are seeking to acquire in the telecom software space:

- Large telecom vendors
- Probe vendors
- OSS/BSS solution providers
- Policy and mobile device management providers
- Mobile network quality companies
- Private equity firms
- Telecom professional services companies

In the course of recent transactions and ongoing market research, we contacted over 70 companies in the above seven categories and 30 of those companies have a strategic mandate to acquire a company in the Telco Software sector. They have wherewithal to pull off the transaction and leverage their existing customer relationships and distribution channels to integrate the solution and create a sizeable offering in this space. These players are actively searching for the right acquisition targets.

The typical process for one to explore the market, determine interest in a strategic sale and complete the transaction is around six months. Bois Capital runs a very streamlined process to help secure the right strategic partner and valuation for its clients. Bois Capital has a deep sector experience, senior level connections and execution expertise in the Telco Software sector. If you are interested in exploring your growth options including a strategic exit, Bois Capital will be happy to schedule a brainstorming session, discuss the dynamics of your business, the strategic fit with potential targets within the analytics ecosystem, provide valuation metrics, and confidentially discuss the next steps.

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